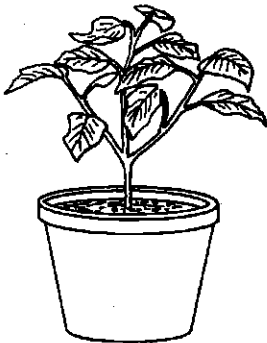
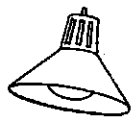
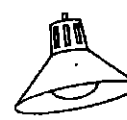
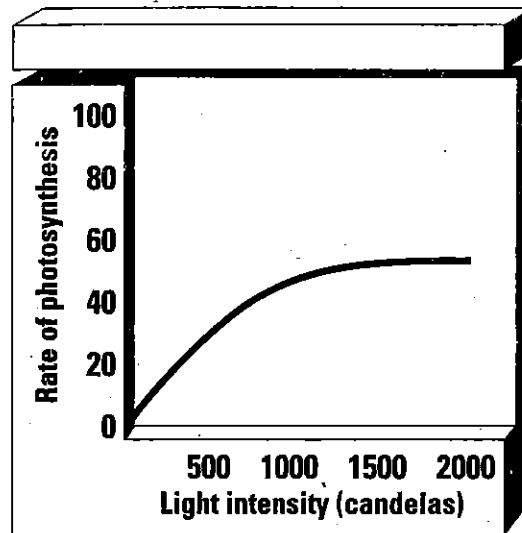


TRANSPARENCY

21

LIGHT AND PLANT GROWTH



A



B



C

TRANSPARENCY 21 LIGHT AND PLANT GROWTH**USE WITH CHAPTER 10, SECTION 10.2**

1. The bottom of the transparency shows an experimental setup and the top shows a graph based on the data resulting from the experiment. Study the transparency. What is the independent variable in this experiment?
- _____

2. What is the dependent variable in this experiment? _____

3. Based on your knowledge of chemical reactions and of the raw materials plants need to perform photosynthesis, what conditions would have to be controlled in order for you to be able to conclude that your observations are related only to the independent variable described in your answer to question #1? _____
- _____

4. Study the graph. What range of light intensity (in candelas) resulted in the most rapid increase in the rate of photosynthesis? _____
- _____

5. Observe the size of the plants in each of the experimental setups as well as the number of lights used. Compare these setups to the graph. How is the growth of the plants in setup B and setup C reflected in the shape of the curve? _____
- _____

6. What would you predict would happen to the rate of photosynthesis if the plants were exposed to a light intensity of 3000 candelas? _____
- _____

7. Assuming that the plants used in the experiment provided typical data about photosynthesis, what generalization could you make about the relationship of light intensity to the rate of photosynthesis? _____
- _____